

**REMARKS**

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As noted in the Office Action Summary, claims 1-39 were pending. By the present response, claims 40-41 have been added, claims 1, 13, 18, 22-23, 25, 28, 35-36, and 38 amended, and claims 19 and 24 canceled. Thus, upon entry of the present response, claims 1-18, 20-23 and 25-41 remain pending and await further consideration on the merits.

***ALLOWABLE SUBJECT MATTER***

Applicants gratefully acknowledge the indication at page 9 of the Official Action that claims 13-14, 18, 22, 25, and 35-36 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. By the present response, claims 13, 18, 22, 25, 35 and 36 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims and are considered allowable. Claim 14 remains dependent on claim 13 and is also considered allowable.

Claim 25 is directed to an apparatus wherein an optical probe is positioned within a cigarette. It thus appears that the feature of a cigarette renders the subject matter of claim 25 patentable over the applied references. In order to expedite prosecution of the present application, the feature of the cigarette has been incorporated in claims 1 and 23.

Likewise, in view of the indicated allowability of claim 36, method claim 28 has been amended to incorporate the feature of a cigarette.

***REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103***

In the Official Action, beginning at page 2, claims 23-24, 26-28, 30-31, 33-34 and 37 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Brian M. Cullum et al., "High-Temperature Fluorescence Measurements and Instrumentation for Polyaromatic Hydrocarbons (PAH): A Review", Journal of Polycyclic Aromatic Compounds, Vol. 18, No. 1, pp. 25-47 (2000) (hereafter "*Cullum et al.*"). In the Official Action, beginning at page 3, claims 1, 7, 9, 10-12, 15-17, 19-21 and 32 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Cullum et al.* in view of U.S. Patent No. 4,569,592, issued to Osada et al. (hereafter "*Osada et al.*"). In the Official Action, beginning at page 7, claims 1, 2-4, 8 and 29 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Cullum et al.* in view of U.S. *Osada et al.* and further in view of U.S. Patent No. 4,577,109 issued to Hirschfeld (hereafter "*Hirschfeld*"). In the Official Action, beginning at page 8, claim 38 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Cullum et al.* In the Official Action, beginning at page 8, claims 3 and 39 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Cullum et al.* in view of *Osada et al.*, and further in view of U.S. Patent No. 5,220,172 issued to Berthold (hereafter "*Berthold*"). Applicants respectfully request reconsideration of these rejections.

Each of Applicants' independent claims 1, 23 and 28 have been amended to include reference to and clarify that the apparatus is in a high temperature environment of a burning cigarette (claim 1), the material of the burning cigarette is undergoing combustion (claim 1 and claim 23), and/or the gaseous by-products are produced by combustion of a cigarette (claim 28). Each of these features is similar to the features of claims 25, 35 and 36 indicated as allowable. Thus, it is respectfully submitted that independent claims 1, 23 and 28 (and their dependent claims 2-12, 15-17, 19-21, 24-27, 29-34, 37-41) are also distinguishable over the cited documents for at least the same reasons. For at least the above noted reason, the rejections should be withdrawn.

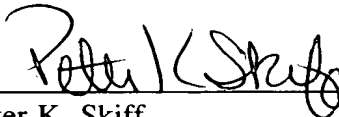
***CONCLUSION***

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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